

Please type a plus sign (+) inside the box ☐

PTO/SB/08B (08-00)

Approved for use through 10/31/2002. OMB 0651-003

U.S. Patent & Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Action of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for form 1449A/PTO		Application Number 09/612,473	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets necessary)		Filing Date 06/01/01	
		First Named Inventor Lin	
		Group Art Unit 2874	
		Examiner Name Unknown	
		Docket Number LIGHT1960	
SHEET 1	OF 6	<div style="border: 1px solid black; border-radius: 50%; padding: 10px; text-align: center;"> COMPLETED OTPE JAN 29 2002 U.S. PATENT & TRADEMARK OFFICE </div>	

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (If known)			
JTD	1	4,618,210		Kondo	10-21-1986	
	2	4,747,654		Yi-Yan	03-31-1988	
	3	4,813,757		Sakano et al.	03-21-1989	
	4	4,846,542		Okayama	07-11-1989	
	5	5,002,350		Dragone	03-26-1991	
	6	5,013,113		Sorel	05-07-1991	
	7	5,039,993		Dragone	08-13-1991	
	8	5,243,672		Dragone	09-07-1993	
	9	5,412,744		Dragone	05-02-1995	
	10	5,450,511		Dragone	09-12-1995	
	11	5,467,418		Dragone	11-14-1995	
	12	5,581,643		Wu	12-03-1996	
	13	5,706,377		Li	01-06-1998	
	14	5,841,931		Forzi et al.	11-24-1998	
	15	5,838,811		Greene	08-17-1999	
	16	6,108,478		Harpon et al.	08-22-2000	
	17	6,118,909		Chen et al.	09-12-2000	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁴
		Office ³	Number ⁴ (If known)				
JTD	18	EPO	0647851A1	AT&T Corp.	12-04-1995		
	19	EPO	0585942A2	Lucent Technologies, Inc.	15-03-2000		
	20	Japan	2-179621	Oni Electric Ind. Co. Ltd.	12-7-1990		
	21	Japan	6-186598	Hitachi Ltd.	8-7-1994		
	22	Japan	63-197923	NEC Corp.	16-8-1988		

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ⁴
JTD	23	ABE, et al., Optical Path Length Trimming Technique using Thin Film Heaters for Silica-Based Waveguides on Si, Electronics Letters, September 12, 1996, Vol. 32 No. 19, pp. 1815-1820	
	24	ALBERT, J., Planar Fresnel Lens Photocompacted in a Germanium-Doped Silica Optical Waveguide, Optics Letters, May 15, 1995, Vol. 20 No. 10, pp 1138-1138	
	25	AMAN, M.C., Calculation of Metal-Clad Ridge-Waveguide (MCRW) Laser Modes by Mode Coupling Technique, Journal of Lightwave Technology, VOL. LT-4, No.6, June 1986, pg 689-693	

Examiner Signature	<i>Jennifer Davis</i>	Date Considered	10/24/03
--------------------	-----------------------	-----------------	----------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two letter-code (WIPO Standard ST 3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. *Kind of documents by the appropriate symbols as indicated on the document under WIPO Standard ST 16 if possible. *Applicant is to place a check mark here if English language translation is attached.

Gray Cary/GT6272840.1
2101501-165382

Attachment to paper 1003

Please type a plus sign (+) inside the box ☒

PTO/SB/08B (08-00)

Approved for use through 10/31/2002. OMB 0651-003
U.S. Patent & Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Action of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for form 1449A PTO				COMPLETE IF KNOWN	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets necessary)				Application Number	09/872,473
				Filing Date	06/01/01
				First Named Inventor	Lin
				Group Art Unit	2874
				Examiner Name	Unknown
SHEET	2	OF	6	Docket Number	LIGHT960



OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No.†	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published			
JTD	✓ 26	AMANN, M.C. et al., Calculation Of The Effective Refractive-Index Step For The Metal-Cladded-Ridge-Waveguide Laser, Applied Optics, VOL. 20, No. 8, Apr 15 1981, pg 1483-1486			
	✓ 27	BABA, S. et al., A Novel Integrated-Twin-Guide (ITG) Optical Switch with a Built-in TIR Region, IEEE Photonics Technology Letters, VOL. 4, No. 5, May 1992, pg 486-488			
	✓ 28	BENSON, T.M., Etched-Wall Bent-Guide Structure for Integrated Optics in the III-V Semiconductors, Journal of Lightwave Technology, VOL. LT-2, No. 1, Feb 1984, pg 31-34			
	✓ 30	BERRY, G.M. et al., Analysis Of Multiplexer Semiconductor Rib Waveguides With High Refractive Index Substrates, Electronics Letters, VOL. 29, No. 22, Oct 28 1993, pg 1941-1942			
	✓ 31	BEITY, I. et al., A Robust, Low-Crosstalk, InGaAsP/InP Total-Internal-Reflection Switch For Optical Cross-Connect Application			
	✓ 32	BURKE, S.V., Spectral Index Method Applied to Coupled Rib Waveguides, Electronics Letters, VOL. 25, No. 9, Apr 27 1989, pg 605-606			
	✓ 33	BURNS, W.K. et al., Mode Conversion in Planar-Dielectric Separating Waveguides, IEEE Journal of Quantum Electronics, VOL. QE-11, No. 1, Jan 1975, pg 32-39			
	✓ 34	CAI, Y. et al., A Novel Three-Guide Optical Coupler Using A Taper-Formed Waveguide, J. Appl. Phys 69(5), Mar 1991, pg 2810-2814			
	✓ 35	CAVAILLES, J.A. et al., First Digital Optical Switch Based on InP/GaInAsP Double Heterostructure Waveguides, Electronics Letters, VOL. 27, No. 9, Apr 25 1991, pg 699-700			
	✓ 36	CHEN, R.T. et al., Design and Manufacturing of WDM Devices, Proceedings of SPIE VOL. 3234			
	✓ 37	CLEMENS, et al., Wavelength-Adaptable Optical Phased Array in SiO ₂ -Si, Photonics Technology Letters, October 1995, Vol. 7-No 10, 1040-1041.			
	✓ 38	DAGLI, N. et al., Analysis of Rib Dielectric Waveguides, IEEE Journal of Quantum Electronics, VOL. QE-21, No. 4, Apr 1985, Pg 315-321			
	✓ 39	DAGLI, N. et al., Theoretical and Experimental Study of the Analysis and Modeling of Integrated Optical Components, IEEE Journal of Quantum Electronics, VOL. 24, No. 11, November 1988, pg 2215-2226			
	✓ 40	DERI, R.J., et al., Low-Loss GaAs/AlGaAs Waveguide Phase Modulator Using A W- Shaped Index Profile, Sep 6 1988			
	✓ 41	DERI, R.J., et al., Low-Loss Multiple Quantum Well GaInAs/InP Optical Waveguides, Feb 21, 1989			
	✓ 42	DEVAUX, F. et al., 20Gbit/s Operation of a High-Efficiency InGaAsP/InGaAsP MQW Electroabsorption Modulator With 1.2-V Drive Voltage, IEEE Photonics Technology Letters, VOL. 5, No. 11, Nov 1993, pg 1288-1290			
	✓ 43	DOERR, C.R. et al., Chirping Of The Waveguide Grating Router For Free-Spectral-Range Mode Selection In The Multifrequency Laser, IEEE Photonics Technology Letters, April 1996, Vol. 8-No. 4, pg 500-502			
	✓ 44	DOERR, C.R. et al., Chromatic Focal Plane Displacement in the Parabolic Chipped Waveguide Grating Router, May 1997, Vol. 9-No. 5, pg 625-627			
	✓ 45	DRAGONI, C. Efficient NaN Star Couplers Using Fourier Optics, pp 479-48, March 1989, Vol. 7-No. 3, Journal of Lightwave Technology			
	✓ 46	FISCHER, et al., Singlemode Optical Switches Based on SOI Waveguides with Large Cross-Section, Electronics Letters, March 3, 1994, Vol. 30-No. 5, pg 406-408			
	✓ 47	FISCHER, K. et al., Sensor Application Of SiON Integrated Optical Waveguides On Silicon, Elsevier Sequoia, 1992, pg 209-213			
	✓ 48	FISH, G. et al., Monolithic InP Optical Crossconnects: 4x4 and Beyond, JWB-2.1, Pg 19-21			
	✓ 49	FURUTA, H. et al., Novel Optical Waveguide For Integrated Optics, Applied Optics, VOL. 13, No. 2, Feb. 1974, pg 322-326			
	✓ 50	GINI, E. et al., Low Loss Self-Aligned Optical Waveguide Corner Mirrors in InGaAsP/InP, We P222			
	✓ 51	GOEL, K. et al., Design Considerations for Low Switching Voltage Crossing Channel Switches, Journal of Lightwave Technology, VOL. 6, No. 6, June 1988, pg 881-886			

Examiner Signature	Jennifer Doan	Date Considered	10/24/03
--------------------	---------------	-----------------	----------

*EXAMINER Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

†Unique citation designation number. ‡Sec attached Kinds of U.S. Patent Documents. §Enter Office that issued the document, by the two letter-code (WIPO Standard ST.3).

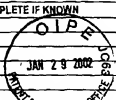
*For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. *Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. *Applicant is to place a check mark here if English language translation is attached.

Please type a plus sign (+) inside the box ☐

PTO/SB/08B (08-00)

Approved for use through 10/31/2002. OMB 0651-003
U.S. Patent & Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Action of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for form 1448A/PTO		COMPLETE IF KNOWN 	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets necessary)		Application Number	09/872,473
		Filing Date	08/01/01
		First Named Inventor	Lin
		Group Aft Unit	2874
		Examiner Name	Unknown
SHEET 3	OF 6	Docket Number	LIGHT1960

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.†	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	TV
JD	52	GRANESTRAND, P. et al., <i>Integrated Optics 4x4 Switch Matrix with Digital Optical Switches</i> , Electronics Letters, VOL 26, No. 1, Jan 4, 1990, pg 4-5	•
	53	HIMENO, A. et al., <i>Loss Measurement and Analysis of High-Silica Reflection Bending Optical Waveguides</i> , Journal of Lightwave Technology, January 1988, Vol. 6-No. 1, 41-46.	•
	54	HSU, K.Y. et al., <i>Photonic devices and Modules</i> , www.cs.cmu.edu/~cliff/ee/mt/research_topical/photonic_devices_modules.htm , pp 1-3.	•
	55	HUANG, T.C. et al., <i>Depletion Edge Translation Waveguide Crossing Optical Switch</i> , IEEE Photonics Technology Letters, VOL 1, No.7, Jul 1989, pg 168-170	•
	56	HUTCHESON, L.D. et al., <i>Comparison of Bending Losses in Integrated Optical Circuits</i> , Optics Letters, VOL 5, No. 6, Jun 1980, pg 360-362	•
	57	INOUE, H. et al., <i>Low Loss GaAs Optical Waveguides</i> , Journal of Lightwave Technology, VOL LT-3, No. 6, Dec. 1985, pg 204-209	•
	58	IRACE, A. et al., <i>Fast Silicon-on-Silicon Optoelectronic Router Based on a BMFT Device</i> , Journal of Selected Topics in Quantum Electronics, January/February 2000, Vol. 6-No. 1, pp. 14-18.	•
	59	ITO, F. et al., <i>Coupled-Injection-Type Optical Switch in GaAs With A 1.06-1.55 μm Wavelength Range</i> , Appl. Physics Letters, 54(2) Jan 9, 1989, pg 134-136	•
	60	JACKMAN, N. et al., <i>Optical Cross Connects for Optical Networking</i> , Bell Labs Technical Journal, Jan-Mar, 1999, pg 282-281	•
	61	JOHNSTON, I.R. et al., <i>Silicon-Based Fabrication Process For Production Of Optical Waveguides</i> , IEE Proc-Optoelectron., VOL 143, No.1, Feb 1996, pg 37-40	•
	62	KAKENKO, A. et al., <i>Athermal Silica-based Arrayed-waveguide Grating (AWG) Multiplexers with New Low Loss Groove Design</i> , Tl01-1, pg 204-206	•
	63	KASAHARA, R. et al., <i>Low Power Consumption Silica-Based 2x2 Thermoptic Switch Using Trenched Silicon Substrate</i> , IEEE Photonics Technology Letters, VOL 11, No. 9, Sep 1999, pg 1132-1134	•
	64	KHAN, M.N. et al., <i>Fabrication-Tolerant, Low-Loss, and High-Speed Digital Optical Switches in InGaAsP/InP Quantum Wells</i> , Proc 21 st Eur Conf on Opt Comm (ECOC '95-Brussels), pg 103-106	•
	65	KHAN, M.N. et al., <i>High-Speed Operation of Quantum Well Electron Transfer Digital Optical Switches</i> , pg 102-102c	•
	66	KIRIHARA, T. et al., <i>Lossless And Low Crosstalk 4x4 Optical Switch Array</i> , Electronics And Communications In Japan, Part 2, VOL 77, No.11, 1994, pg 73-81	•
	67	KIRIHARA, T. et al., <i>Lossless and Low-Crosstalk Characteristics in an InP-Based 2x2 Optical Switch</i> , IEEE Photonics Technology Letters, VOL 5, No. 9 Sept 1993, pg 1059-1061	•
	68	KOKUBUN, Y. et al., <i>Athermal Waveguides for Temperature-Independent Lightwave Devices</i> , November 1993, 1297-1298, Vol. 5-No. 11, IEEE Photonics Technology Letters.	•
	69	KOKUBUN, Y. et al., <i>Temperature-Independent Narrowband Optical Filter at 1.3 μm Wavelength by an Athermal Waveguide</i> , 10 th October 1996, Vol. 32-No. 21, Electronics Letters	•
	70	KOKUBUN, Y. et al., <i>Temperature-Independent Optical Filter at 1.55 μm Wavelength Using a Silica-Based Athermal Waveguide</i> , 19 February 1998, Vol. 34-No. 4, Electronics Letters	•
	71	KOKUBUN, Y. et al., <i>Three-Dimensional Athermal Waveguides for Temperature Independent Lightwave Devices</i> , 21 st July 1994, Vol. 30-No. 15, Electronics Letters	•
	72	KOSTRZEWA, C. et al., <i>Tunable Polymer Optical Add/Drop Filter for Multiwavelength Networks</i> , Photonics Technology Letters, November 1997, Vol. 9-No. 11, 1467-1469	•
	73	LAARMAN, K.D. et al., <i>Waveguides: Characteristic Modes Of Hollow Rectangular Dielectric Waveguides</i> , Applied Optics, VOL 15, No. 5, May 1976, pg 1334-1340.	•

Examiner Signature	<i>Jennifer Brown</i>	Date Considered	10/24/03
--------------------	-----------------------	-----------------	----------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered include copy of this form with next communication to applicant.

†Unique citation designation number. ‡See attached Kinds of U.S. Patent Documents. §Enter Office that issued the document, by the two letter-code (WIPO Standard ST. 3). ¶For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ¶Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. *Applicant is to place a check mark here if English language translation is attached

Please type a plus sign (+) inside the box ☒

PTO/SB/08B (08-00)

Approved for use through 10/31/2002. OMB 0651-003
U.S. Patent & Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Action of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for form 1449A PTO		COMPLETE IF KNOWN	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets necessary)		Application Number	09872.473
		Filing Date	06/01/01
		First Named Inventor	Lin
		Group Art Unit	2874
		Examiner Name	Unknown
		Docket Number	LIGHT1960
SHEET	4	OF	6



OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog etc.), date, page(s), volume issue number(s), publisher, city and/or country where published	Ts
TD	74	LEE, T.P. et al., <i>AlGaAs Double-Heterostructure Rib-Waveguide Injection Laser</i> , IEEE Journal of Quantum Electronics, VOL. QE-11, No. 7, July 1975, pg 432-435	-
	75	LIU, Y.L. et al., <i>Silicon 1x2 Digital Optical Switch Using Plasma Dispersion</i> , Electronics Letters, VOL. 30, No. 2, Jan/20, 1994, pg 130-131	-
	76	MAK, C. et al., <i>High-Speed Bulk InGaAsP InP Electroabsorption Modulators with Bandwidth in Excess of 20 GHz</i> , IEEE Photonics Technology Letter, VOL. 2, No. 10, Oct 1990, pg 730-733	-
	77	MARCATILI, E., <i>Improved Coupled-Mode Equations for Dielectric Guides</i> , IEEE Journal of Quantum Electronics, VOL. QE-22, No. 6, June 1986, pg 988-993	-
	78	MARCATILI, E.A.J., <i>Bends in Optical Dielectric Guides: The Bell System Technical Journal</i> , Sep 1969, pg 2103-2132	-
	79	MARCATILI, E.A.J., <i>Dielectric Rectangular Waveguide and Directional Coupler for Integrated Optics</i> , The Bell System Technical Journal, Sept 1969 pg 2071-2101	-
	80	MARCATILI, E.A.J., <i>Star-Coupled Waveguides</i> , The Bell System Technical Journal, April 1974; American Telephone & Telegraph Company, VOL. 53, No. 4, April 1974	-
	81	MIRZA, A.R. et al., <i>Silicon Wafer Bonding For MEMS Manufacturing</i> , Solid State Technology, Aug 1999, pg 73-78	-
	82	MOERMAN, I. et al., <i>A Review on Fabrication Technologies for the Monolithic Integration of Tapers with III-V Semiconductor Devices</i> , IEEE Journal of Selected Topics in Quantum Electronics, VOL. 3, No. 6, Dec. 1997, pg 1308-1320	-
	83	MULLER, G. et al., <i>First Low Loss InPInGaAsP Optical Switch with Integrated Mode Transformers</i> , ThC12.10, Pg 37-40	-
	84	NAYYER, J. et al., <i>Analysis of Reflection-Type Optical Switches with Intersecting Waveguides</i> , Journal of Lightwave Technology, VOL. 6, No. 6, June 1988, pg 1146-1152	-
	85	NEGAMI, I. et al., <i>Guided-Wave Optical Wavelength Demultiplexer Using An Asymmetric Y Junction</i> , Appl. Phys. Lett. 54 (12), Mar 20, 1989, pg 1080-1082	-
	86	NELSON, W. et al., <i>Optical Switching Expands Communications Network Capacity</i> , Laser Focus World, Jun 1994, pg 517-520	-
	87	NELSON, W.H. et al., <i>Wavelength- and Polarization-Independent Large Angle InPInGaAsP Digital Optical Switches with Extinction Ratios Exceeding 20 dB</i> , IEEE Photonics Technology Letters, VOL. 6, No. 11, Nov. 1994, pg 1332-1334	-
	88	NODA, Y. et al., <i>High-Speed Electroabsorption Modulator with Strip-Loaded GaInAsP Planar Waveguide</i> , Journal of Lightwave Technology, VOL. LT-4, No. 10, Oct 1988, pg 1445-1453	-
	89	OFFREIN, B.J. et al., <i>Resonant Coupler-Based Tunable Add-After-Drop Filter in Silicon-Oxynitride Technology for WDM Networks</i> , Journal of Selected Topics in Quantum Electronics, Vol. 5-No. 5, 1400-1405.	-
	90	OKAMOTO, K. et al., <i>Arrayed-Waveguide Grating Multiplexer With Flat Spectral Response</i> , Optics Letters, Jan 1 1995, VOL. 20, No. 1, Pg 43-45	-
	91	OKAMOTO, K. et al., <i>Flat Spectral Response Arrayed-Waveguide Grating Multiplexer with Parabolic Waveguide Horns</i> , Electronics Letters Online, July 15, 1996, No. 19961120, pp. 1661-1662.	-
	92	OKAYAMA, H. et al., <i>8x8 TeInNbO₂ Waveguide Digital Optical Switch Matrix</i> , IEICE Trans. Commun., VOL. E77-B, No. 2, Feb. 1994, pg 204-208	-
	93	OKAYAMA, H. et al., <i>Dynamic Wavelength Selective Add/Drop Node Comprising Tunable Gratings</i> , Electronics Letters Online, April 10, 1997, No. 19970607.	-
	94	OKAYAMA, H. et al., <i>Reduction of Voltage-Length Product for Y-Branch Digital Optical Switch</i> , Journal of Lightwave Technology, VOL. 11, No. 2, Feb 1993, pg 379-387	-
	95	OKUNO, M. et al., <i>Strictly Nonbackscattering 16x16 Matrix Switch Using Slice Based Planar Lightwave Circuits</i> , VOL. 10, No. 286, Sep 11, 1986	-
	96	OOBA, N. et al., <i>Athermal Silica-Based Arrayed-Waveguide Grating Multiplexer Using Bimetal Plate Temperature Compensator</i> , Electronics Letters, 12 th October 2000, Vol. 36, No. 21, pg 1800-1801	-

Examiner Signature	<i>Jennifer Doan</i>	Date Considered	10/24/03
--------------------	----------------------	-----------------	----------

*EXAMINER. Initial if reference considered/whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two letter-code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached.

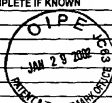
Please type a plus sign (+) inside the box ☒

PTO/SB/08B (08-00)

Approved for use through 10/31/2002. OMB 0651-003
U.S. Patent & Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for form 1484A-PFO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets necessary)		COMPLETE IF KNOWN Application Number 06072473 Filing Date 06/01/01 First Named Inventor Lin Group At Unit 2874 Examiner Name Unknown Docket Number LIGHT1960	
SHEET	5	OF	6



OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.†	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	TS
✓	97	RENAUD, M. et al., Compact Digital Optical Switches for Low Insertion Loss Large Switch Arrays on InP, Proc. 21 st Eur. Conf. on Opt. Comm. (ECOC '95-Brussels), pp 99-102	.
✓	98	RICHMAN, A.G. et al., Silicon-on-Insulator Optical Rib Waveguide Loss and Mode Characteristics, Journal of Lightwave Technology, October 1994, Vol. 12-No. 10, pp 1771-1776	.
✓	99	ROLLAND, C. et al., 10 Gbit/s, 1.56 µm, Multiquantum Well InP/InGaAsP Mach-Zehnder Optical Modulator, Electronics Letters, Mar 4, 1993, VOL 29, No. 5, pg 471-472	.
✓	100	Sanlec Sales Brochure for year 2000 entitled "Optical Components"	.
✓	101	SCHAUWECKER, B. et al., Small-Scale Silicon-Cryolite AWG Demultiplexer Operating Around 725 nm, IEEE Photonics Technology Letters, Vol. 12 No. 12, December 2000	.
✓	102	SCHLACHTZKY, A., Monolithic IO-Technology-Modulators and Switches Based on InP, SPIE VOL 651 Integrated Optical Circuit Engineering III (1988), pg 60-66	.
✓	103	SILBERBERG, Y. et al., Digital Optical Switch, Appl. Phys. Lett., VOL. 51, No. 16, Oct 19, 1987, pg 152-154	.
✓	104	SMIT, M.K., New Focusing and Dispersive Planar Component Based on an Optical Phased Array, Electronics Letters, Mar 31, 1988, VOL 24, No. 7, Pg 385-386	.
✓	105	SMITH, S.D. et al., CW Operation of Corner Cavity Semiconductor Lasers, IEEE Photonics Technology Letters, VOL. 5, No. 8, Aug 1993, pg 876-879	.
✓	106	SNEH, A. et al., Compact Low Crosstalk and Low Propagation Loss Quantum-Well V-Branched Switches, POP 4-1-4-5	.
✓	107	SOOLE, J.B.D. et al., Use of Multimode Interference Couplers to Broaden the Passband of Wavelength-Dispersive Integrated WDM Filters, IEEE Photonics Technology Letters, VOL. 8, No. 10, Oct 1996, pg 1340-1342	.
✓	108	STOLL, L. et al., 1.8 Optical Matrix Switch on InP/InGaAsP with Integrated Mode Transformers, Optical Switches and Modulators II, pg 531-534	.
✓	109	STOLL, L. et al., Compact and Polarization Independent Optical Switch on InP/InGaAsP, TuB7.2, pg 337-340	.
✓	110	STUTIUS, W. et al., Silicon Nitride Films On Silicon For Optical Waveguides, Applied Optics, VOL. 16, No. 12, Dec 1977, pg 303-307	.
✓	111	SUGIE, T. et al., 1.3 µm Laser Diodes with a Built-in Selectively Grown Spot-Size Converter, THB2-6, 100C95, pg 52-53	.
✓	112	TADA, K. et al., Bipolar Transistor Carrier-Injected Optical Modulator/Switch: Proposal and Analysis, IEEE Electron Device Letters, VOL EDL-7, No. 11, Nov 1986, pg 605-606	.
✓	113	TAKADA, et al., Optical Spectrum analyzer using Cascaded AWG's with Different Channel Spacings, Photonics Technology Letters, July 1999, Vol. 11, No. 7, pg. 863-864.	.
✓	114	TAKAHASHI, H. et al., Arrayed Waveguide Grating for Wavelength Division Multi-Demultiplexer with Nanometre Resolution, PWG-NTT-7	.
✓	115	TAKIGUCHI, K. et al., Dispersion Compensation Using a Planar Lightwave Circuit Optical Equalizer, Photonics Technology Letters, April 1994, Vol. 6, No. 4, pg. 561-564.	.
✓	116	TIEN, P.K. et al., Formation of Light-Guiding Interconnections in an Integrated Optical Circuit by Composite Tapered-Film Coupling, Applied Optics, VOL. 12, No. 8, Aug 1973, pg 1909-1915	.
✓	117	TOYODA et al., Thermoplastic Switch and Wavelength Tunable Filter using Polymer Waveguides, Abstract of paper presented at Opticon 2001 on August 22, 2001.	.
✓	118	TREYZ, G.V. et al., Silicon Optical Modulators at 1.3 µm Based on Free-Carrier Absorption, IEEE Electron Device Letters, VOL. 12, No. 6, June 1991, pg 276-278.	.
✓	119	TSUDA, H. et al., Performance Analysis of a Dispersion Compensator Using Arrayed Waveguide Gratings, Journal of Lightwave Technology, August 2000, Vol. 18-No.8, pg 1139-1147.	.

Examiner Signature	Jennifer Doan	Date Considered	10/24/03	Examiner Signature	✓
--------------------	---------------	-----------------	----------	--------------------	---

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

†Unique citation designation number. *See attached Kinds of U.S. Patent Documents. *Enter Office that issued the document, by the two letter-code (WIPO Standard ST.3). *For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. *Kind of document by the appropriate symbols as indicated on the document under WIPO Standard St. 16 if possible. *Applicant is to place a check mark here if English language translation is attached.

Gray Cary/GT6272840.1
7101501-165382

Please type a plus sign (+) inside the box ☐

PTO/SB/08B (08-00)

Approved for use through 10/31/2002. OMB 0651-003
U.S. Patent & Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Subtitle for Form 1482A/PTD INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets necessary)		COMPLETE IF KNOWN Application Number 09872473 Filing Date 06/01/01 First Named Inventor Lin Group Art Unit 2874 Examiner Name Unknown Docknet Number LIGHT1560	
SHEET	6	OF	6



OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	TR
✓	120	TSUJIE, H. et al., Second- and Third-Order Dispersion Compensator Using a High-Resolution Arrayed Waveguide Grating, IEEE Photonics Technology Letters, May 1999, Vol. 11-No. 5, 569-571.	-
✓	121	VINCHANT et al., InP 4x4 Digital-Optical-Switch Module For Multiwavelength Cross-Connect Applications, OFC '95 Technical Digest, Thursday ThK2, pg 281-282	-
✓	122	VINCHANT, J.F. et al., First Polarization insensitive 4x4 Switch matrix on InP with Digital Optical Switches, TuB7.3, pg 341-344	-
✓	123	VINCHANT, J.F. et al., InP Digital Optical Switch: Key Element for Guided-Wave Photonic Switching, IEEE Proceedings-J, VOL. 140, No.5, Oct 1993, pg 301-307	-
✓	124	VINCHANT, J.F. et al., Low Driving Voltage or Current Digital Optical Switch on InP for Multiwavelength System Applications, Electronics Letters, VOL. 28, No.12, Jun 4, 1992, pg 1135-1137	-
✓	125	WAKITA, K. et al., Long Wavelength Waveguide Multiple Quantum Well Optical Modulators, IEEE Journal of Quantum Electronics, VOL. DE-23, No.12, Dec 1987, pg 2210-2215	-
✓	126	WANRU, Z. et al., Total Internal Reflection Optical Switch with Injection Region Isolated by Oxygen Ion Implantation, pg 1-10	-
✓	127	YAMADA, et al., Cross Talk Reduction in a 10 GHz Spacing Arrayed-Waveguide Grating by Phase-Error Compensation, Journal of Lightwave Technology, March 1998, Vol. 16-No. 3, pp. 364-371.	-
✓	128	YANAGAWA, H. et al., Polarization- and Wavelength-Insensitive Guided-Wave Optical Switch with Semiconductor Y Junction, Journal of Lightwave Technology, VOL. 8, No.8, Aug 1990, pg 1132-1137	-
✓	129	YU, S. et al., High Speed All-Optical Packet Routing Using A Vertical Coupler Crosspoint Space Switch	-
✓	130	YU, S. et al., Ultralow Cross-Talk, compact integrated optical crosspoint space switch arrays employing active InGaAsP/InP Vertical Waveguide Couplers, Integrated Optical Crosspoint Switch Arrays, Sijuan Yu et al., CPD24-2	-
✓	131	ZENGGERLE, R. et al., Tapered Twin Waveguides For Spot-Size Transformation In InP: TheB2-5, IOOC 95, pg 50-51	-
✓	132	ZIRINGIBI, M. et al., Digitally Tunable Laser Based On The Integration Of A Waveguide Grating Multiplexer And An Optical Amplifier, IEEE Photonics Technology Letters, April 1994, Vol. 6-No. 4, pp 516-517	-
✓	133	ZÜCKER, J.E. et al., Strained Quantum Wells for Polarization-Independent Electrooptic Waveguide Switches, Journal of Lightwave Technology, VOL. 10, No.12, Dec 1992, pg 1928-1930	-

Examiner Signature	Jennife Dean	Date Considered	10/24/03
--------------------	--------------	-----------------	----------

*EXAMINER. Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two letter-code (WIPO Standard St.3)

⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard St. 16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached.